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The Bristol Medico-Chirurgical Journal

A Journal of the Medical Sciences for the

West of England and South Wales

"Scire est nescire, nisi id me
Scire alius sciret."

APRIL, 1949

EARLY LIFE*

BY

A. V. NEALE, M.D., F.R.C.P.

Professor of Child Health in the University of Bristol

At the passing of the first Public Health Act in 1848 the infant mortality in *the industrial areas of some of our big cities* was about 400 per thousand live births, perhaps a maximum for all time in this country. To-day we see the great skill and care devoted to the health and safety of mother and child, with the result that infant mortality is now one-tenth of that figure, and there has been a like decrease in the maternal risks. Good team-work yields increasingly good results, and in some areas—notably in Bristol—the saving of infant life is highly efficient. With this background of reasonable but not complacent satisfaction, we can approach the future with confidence, but must remember that our population problems are complex and that significant effects must follow the recent decline in the birthrate. With these matters our economic future is bound up.

Antenatal pædiatrics is a somewhat new approach to our problem. In 1900 Ballantyne made a start on antenatal care which can be considered the beginning of the organized services now available. But in 1926, a year before his death, he warned us against over-zealous action and emphasized the need for the most careful discretion:

* From an address delivered before the Bristol Medico-Chirurgical Society on 10th November, 1948.

reminding us that the aim at all times must be natural labour and the welfare of the baby. He laid emphasis on the need for continuity in the care to be maintained throughout the whole service for mother and child. This is very pertinent in view of the arrangements under the new Health Act: we shall await with interest the effects of the new plans on the health of mother and baby.

ANTENATAL INFLUENCES

The fœtus *in utero* is subject to its own special environment. We must recognize three phases: (A) The early formative phase, up to the twelfth week; (B) a middle phase of simple body-expansion; and (C) the later weeks of storage and maturation.

Susceptibilities differ at each stage. Influences are greatest in the first stage of rapid growth. At its most rapid rate of growth, the weight of the embryo increases 28,000 times in a week: its length at 4 weeks is 4 mm., at 8 weeks 28 mm., and at 12 weeks 75 mm. (3 in.). The ovum, which weighs 0.005 mg., develops into the differentiated organism weighing about 3,000 grams, this resulting from 44 successive cell-divisions and having its greatest velocity in the first 8 weeks of prenatal life. (Warkany, 1947.) The nutritional and oxygen requirements for this high rate of growth are normally ensured by rapid and liberal placental development. We can contrast this with the deterioration of placental efficiency in the later weeks of pregnancy.

The hæmochorial type of placentation in the human is of special interest because it makes for unusually easy transference from maternal to fœtal circulation. This may facilitate passive immunity by antibodies: but it may also produce increased vulnerability and reactions to Rh and other maternal-fœtal incompatibilities. The fœtus, especially in the period 4–12 weeks, is a very susceptible structure, at the mercy of infective elements, unfavourable genetic influences, nutritional deficiency, and possibly even placental injury or separation. Virus disease, e.g. Rubella, may have serious effects on the rapidly-differentiating tissues, and may cause congenital defects: deafness, cataract, microcephaly and heart disease. (Swan.)

The operation of genes is as yet outside any control. But it seems that "gene-action" in the fœtus may be conditioned by other factors. There is much in favour of chemical (enzyme) bases for gene action (Gruneberg), possibly modified by maternal nutrition. Gilman has succeeded in producing in rats "genetic" abnormalities by injecting the mother with cresyl blue early in pregnancy: perhaps the first directly successful experiment in distorting fœtal development. Fœtal susceptibilities may be determined, not only by hereditary influences but by the total circumstances of uterine development. Which is better, a good egg in a bad environment or a bad egg in a good environment?

Warkany (1944) was able to demonstrate in rats the considerable frequency of congenital abnormalities in litters born of mothers deficient in vitamins of the B_2 group, especially nicotinic acid and riboflavine. The vitamins are probably essential for normal embryonic cell division and the action of tissue-organizers. The most dramatic effects are produced by even a single dose of X-rays. In small animals with short gestation periods, the fœtal tissues are extremely sensitive to radiation : death or grotesque deformity may result (Job). In man, examples of defect—mainly in the nervous system—have arisen from this cause (Engelking).

The wonderful researches of the late Sir Joseph Barcroft have thrown a flood of light on fœtal physiology. Fœtal movements can be initiated as early as the twelfth week. An accurate index of fœtal welfare, they appear early and increase in later months, only to diminish towards full term. The oxygen supply during the last weeks of pregnancy tends to diminish owing to placental changes and the relatively great mass of the fœtus. But the best oxygenated blood from the umbilical vein is directed to the fœtal brain, up to the time of the first breath. The risks of intra-uterine anoxia are thereby partly covered, and the high oxygen capacity of fœtal hæmoglobin is a further help. Fœtal hypoglycæmia is probably rare, but when associated with fœtal anoxia it may cause irreparable damage to the brain. Intra-uterine fœtal hypoxia has not yet received sufficient study as a possible cause of later cerebral palsy or mental disorder.

In the last three months the fœtus acquires two-thirds of its calcium, three-quarters of its protein, four-fifths of its iron, and a store of vitamins (except vitamin A). Nature has apparently decided that vitamin A shall be obtained from the colostrum, which is heavily loaded with carotene—hence its yellow colour.

We do not know exactly what processes initiate normal labour. We do not know in many cases why birth is premature : nor why some babies with a birth weight of 5½ lb. or less go ahead excellently and others encounter great difficulties. Which is the better overall risk : a premature baby of 4 lb. or a post-mature of 12 lb. ? Hereby hangs a pretty problem of relative safety.

Prematurity, immaturity and still-birth are to some extent inter-related. Baird showed in Aberdeen that the incidence is correlated inversely with social status. During special periods of the war prematurity and still-births increased in Leningrad and in Holland : before the war, the rates in depressed areas in Britain compared very unfavourably with the low rates in Holland and New Zealand, where nutrition was exceptionally good. Ebbs (in Toronto) was able to show that improved antenatal care and nutrition had a direct bearing on prematurity as well as on neo-natal health. Asher has suggested that in some cases inferiority of male germ-plasm may be a factor in fœtal inferiority.

Low birth weight is no bar to ultimate physical and mental success. Hess (of Chicago) followed up cases for 25 years : out of 200 infants below 3 lb. at birth, 170 achieved satisfactory development. With particular care for the obstetric risks and the dangers of anoxia a much greater survival-rate among premature babies can be expected. The Bristol quadruplets have shown the valuable results of a combined obstetric-pædiatric team. Miller (at Newcastle) has shown the way to safer care for prematures in the home : an organization including the home service of a skilled and conscientious "neo-natal" sister can produce results nearly as good as may be expected in hospital. Such arrangements should form part of the facilities in each area.

In the antenatal phase the obstetrician is in a special position to assess all the factors which give maximum ease and safety. Eardley Holland made known the real significance of intracranial hæmorrhage in the newborn. The modern use of clinical and radiological data has undoubtedly lessened traumatic effects on the fœtus.

TABLE I

Incidence of traumatic meningeal hæmorrhage and asphyxial intra-cerebral hæmorrhage. (Smith.)

	Deaths	Per cent. showing :	
		Tentorial Hæmorrhage	Asphyxial focal Intracerebral Hæmorrhage
PREMATURE LIVE-BORN :			
1931–35	63	22.0	9.5
1941–45	89	4.5	12.5
FULL-TERM LIVE-BORN :			
1931–35	60	30.0	10.0
1941–45	103	11.5	18.0

The increase in the asphyxial cases coincides with the wider use of premedication, anæsthetics, etc., which have, on the whole, allowed birth to proceed more slowly. There is ground for discussion in this, but the fact emerges that unskilled use of pain-killing drugs during labour may have serious effects on the baby.

At 36 weeks and onwards there is a diminishing placental efficiency for oxygen, together with increasing fœtal sensitivity to lowered oxygen tension. Periods of fœtal agitation and slowing of the heart-rate may make clear the embarrassment. Maternal anæmia, antepartum haemorrhage, toxæmia, prolonged labour or cord-displacement are some of the additional troubles the baby may have

to negotiate. We do not know if oxygen inhalation by the mother is of any service, but correction of anæmia is an urgent necessity.

Antepartum hæmorrhage due to placenta prævia may be responsible for a 30 per cent. overall fœtal morality. But with wise obstetric care the live births can be considerably increased (Mills). The hazards of the fœtus in Cæsarean section can be reduced by swift but gentle action. The natural delivery through the vagina is usually devoid of these hazards. Cerebral and pulmonary œdema may occur. Barcroft was convinced that cutaneous and circumoral contacts stimulated the first breath.

The greatest dangers may exist in the first half-hour of life. The brain-cells may rapidly deteriorate in conditions of oxygen deficiency. Anoxia demands emergency measures. The cause may be single : e.g., cerebral irritation or œdema ; or a complex situation may arise from inadequate central response with atelectasis and inhalation of fluids—vernix is particularly harmful ; and narcotics may intensify the effect. In anoxia neonatorum there is rapid disturbance of capillary permeability, with œdema of lungs, etc., causing peripheral circulatory failure : anoxia renders the medulla less responsive. The pressing needs are to clear the bronchi by catheter suction, and to give oxygen. Combined skin and circumoral stimulation with, perhaps, careful rhythmical rocking may suffice (Eve). Alpha-lobeline, coramine, etc., have value. There is a critical period of about ten minutes, after which danger is extreme.

In some premature babies apnœic phases recur for some hours : a few minutes' lapse may prove suddenly fatal. The handling of this condition calls for understanding and a skilled programme of action, with the central object of oxygenating the brain.

TABLE II

Cause of death found in two separate series of a thousand consecutive infant deaths (Potter) per cent. :

	SERIES "A"	SERIES "B"
Anoxia	20.0	28.5
Primary Prematurity ..	18.5	14.5
Congenital Malformation ..	14.0	11.0
Birth Trauma	11.5	13.0
	64.0	67.0

The Lecturer went on to expound the importance of environment in early life. Mental and physical activities emerge in an orderly plan, and it is possible to assess at any age whether these are normal.

Poor health or nutrition may produce obvious retardation. Breast-feeding is obviously of great importance both for baby and mother: it should not be lightly abandoned from indolence or for mere temporary convenience. An adequate protein intake is essential: milk provides the obvious source. In the very earliest months and years mental development should receive attention: a "difficult" baby may be a frustrated baby. The influences of happy family life are preponderant: problems of later delinquency may be avoided by early attention and care.

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ARTERIOGRAPHY OF THE LOWER LIMBS

BY

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McKenzie MacKinnon Research Fellow, from the Department of Surgery, The University of Bristol.

ARTERIOGRAPHY consists in taking X-rays of arteries, the outlines of which are rendered visible by the injection of an opaque medium. The first attempt was made on animals in 1910, bismuth in oil being used. Since then :[1]

1923 Lipiodol used in dogs
Strontium bromide in humans

1924 50 per cent. sodium iodide

1927 Lipiodol in lower limbs of humans

1930 Lipiodol emulsion

1931 Thorotrast in the aorta and lower limbs ; organic iodides used also

1932 Thorotrast for cerebral vessels.

The media now in use are three. Thorotrast is favoured by many.[2, 3] It has the advantage of greater opacity than the iodides and is usually non-irritant : but Lambert[4] in 1935 had a case of gangrene of the leg ; and other disasters reported are death from syncope[5] and suppuration in the groin after extra-vascular injection.[6] The great danger, however, is that it is radioactive : ill results from this have been reported.[9]

Sodium iodide is likely to produce severe reactions and much pain, but it is still used for the aorta.[10, 11]

Organic iodides are the substances now usually employed. The most favoured is diodone (diodrast, Pyelosil). It is prepared in solutions of 35, 50 or 70 per cent. No disasters following its use have been published. Local reactions depend on the concentration : the 35 per cent. solution may produce a feeling of mild heat, the 70 per cent. of great heat, but this passes off quickly. The patient should be warned or he may move and spoil the X-ray. General reactions are very rare : syncope, vomiting, urticaria, etc., have been reported,[12] and it is advisable to have adrenaline at hand. An ocular " sensitivity " test consists of placing a drop of the solution

in the conjunctival sac—if no redness occurs within 1½ minutes the test is "negative" [13]: the value of this is doubtful.[14] Disasters have been reported with other organic iodides, such as Tenebryl,[7] and uroselectan.[8]

Method. The medium may be injected either by exposing the vessel surgically or by percutaneous puncture. The former has the merit of direct control of the puncture site and of the vessel. The injection may be made either without disturbing the artery[15] or after placing around it a tape to control the amount of blood entering during and after the injection, and thereby the dilution of the medium. It is, however, an operation, and one which can be troublesome if small tributaries are torn: and therefore to be avoided if a simpler and safe procedure is available.

Percutaneous puncture has the theoretic disadvantages that the vessel may bleed from the puncture site and that the opaque medium may escape into the tissues. But in practice many hundreds of arterial punctures have been made without any trouble at all: if reasonable precautions are taken, nothing does escape from the vessel—and even if it does, no great harm appears to result when Pyelosil is used. During the injection, one may attempt to control the amount of blood entering the artery by proximal pressure[17] or one may rely on a rapid injection and speedy change of X-ray films to record the passage of the medium down the arteries of the limb.

Before making the injection the state of the vessels and the site of the upper end of the obstruction in the artery is determined clinically and by oscillometry. It is important to know this, for if most of the main vessel is fairly normal 70 per cent. solution is used (Plate V, Fig. 1): but if the block is high in the main vessel or there is narrowing of the vessels (e.g. with atheroma), a 35 per cent. solution is sufficient, for not enough blood enters it to dilute the medium as it is injected (Plate VI, Fig. 4). Knowing the site allows one also to place the films so that the view of the obstruction does not fall at the junction between two of them.

The area over and near the artery is infiltrated with procaine solution. A small nick is made in the skin and the needle (1½ to 2 ins. long, 18 B.W.G.), is gently pushed in without the syringe, guided by one finger on the vessel above the puncture and one below. When the artery is reached, the needle transmits the impulse and, if it is allowed to rest on the vessel, it inserts itself with a little jerk, and the bright blood squirts out.

If the artery goes into spasm when pricked, which does not occur if sufficient procaine has been used, the blood does not squirt out very forcibly nor does it seem as bright as might be expected. This may make the injection difficult, and the visualization of the distal vessels poor. It is surprising with what force venous blood comes from the femoral vein if this is entered: but it is usually fairly

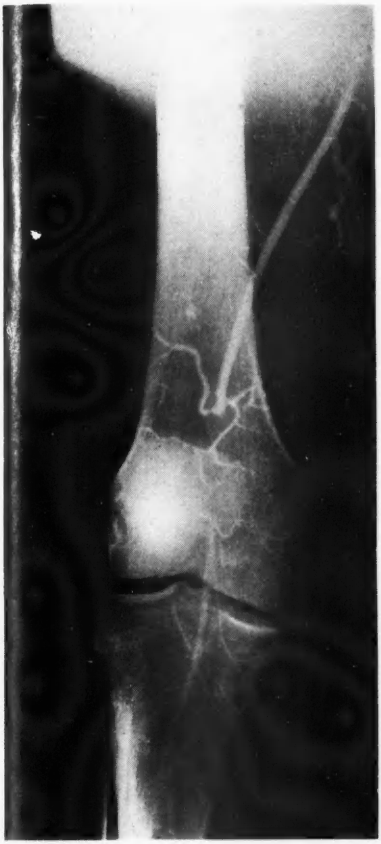

FIG. 1.

Arteriogram using 20 c. cm. of 70 per cent. Pyelosil.
G.H., male, 45 years, under the care of Professor Milnes Walker, suffering from Buerger's disease with intermittent claudication, but a good blood-supply to the skin. The film shows normal appearance of the vessels above and below the block, and the collateral circulation. In July, 1947, the affected segment of artery was excised, but without improvement. The veins seemed normal. In October, 1948, arteriograms using 20 c. cm. of 35 per cent. Pyelosil gave poor films, but showed the vessels to be unchanged. Lumbar sympathetic block with procaine produced good dilatation of the skin vessels but made the claudication worse. Sympathectomy was, therefore, inadvisable, but the missing segment of artery was replaced by a vein-graft.

FIG. 2.

Arteriogram using 20 c. cm. of 35 per cent. Pyelosil.
T.C., male, 60 years, under the care of Mr. Croot. Mild symptoms: the film shows the moth-eaten appearance due to moderate atheroma, and the rapid narrowing of the vessels of the leg. On the other side the superficial femoral artery was thrombosed, and the symptoms were much more severe. A 35 per cent. solution of Pyelosil was thought to be sufficient because of the clinical atheroma and the reduced readings with the oscillometer.

PLATE VI

FIG. 3.

Arteriogram, using 20 c. cm. of 35 per cent. Pyelosil.
C.C., male, 76 years, with advanced atheroma of the femoral arteries; showing the knobbly, uneven appearance of the lumen of both the superficial and deep vessels. The main vessels of the leg were all occluded, and the superciiial femoral narrowed, which accounts for the good picture with 35 per cent. Pyelosil and for the outline of the profunda femoris, which rarely shows when the superficial artery is patent.

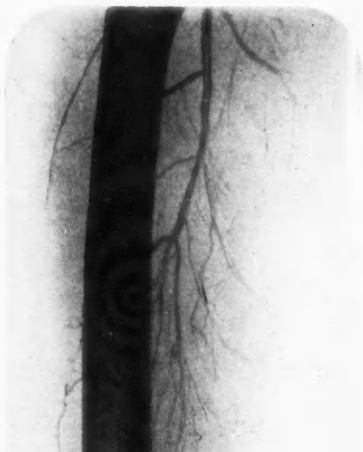

FIG. 4.

Arteriogram using 20 c. cm. of 35 per cent. Pyelosil.
S.W., male, 60 years, with atheromatous occlusion of the superficial artery. This patient had gangrene of the foot and lower leg. The superficial femoral artery is entirely blocked and the blood is flowing via the profunda femoris and a very meagre collateral circulation. The popliteal artery is patent but obviously affected. Amputation below the knee was successful.

obvious that this has happened both because of the dark colour of the blood and because the needle has to be pushed in much further than expected.

After entering the artery, the needle is advanced a few millimetres and normal saline is injected to be sure all is well. 20 c. cm. of Pyelosil is then injected as rapidly as possible ; speed is of the utmost importance if the blood-flow is not controlled—hence the short, wide-bore needle. If it has been impossible to advance the needle within the vessel, local extravasation of Pyelosil may occur. This causes considerable pain for 2–3 days, but usually no other ill effects. Hæmatoma after puncture has not occurred in our cases : neither have thrombosis nor other complications, even in patients with considerable atheroma.

X-rays. In taking the X-rays the tube must be high enough to include the whole limb in one exposure : this usually entails placing the patient on the floor. The first exposure is made after about 15 to 16 c. cm. have been injected and the remaining two or three films are taken as quickly as possible after that, while the injection continues. To obtain quick changes, we employ a box which will hold one set of cassettes ready for exposure, and, under a lead cover, two or three which can be pulled through the box, thus rapidly exposing successive films and bringing those exposed once again under the lead cover (Fig. 5, p. 40).

Indications and Results. Most surgeons are agreed that arteriography is of the greatest use in the diagnosis of aneurysms. It is often said that there is no place for it in occlusive arterial disease of the extremities. But now that it has been shown that an occluded artery can be replaced by a vein graft or even recanalized,[16] it is clearly necessary to know accurately the site, extent and nature of the arterial occlusion (Plate V, Fig. 1).

At the Bristol Royal Infirmary, we have made twenty-five arteriograms. In this small number the general findings for the main vessel are these :

Normal : smooth outline of gradually decreasing size.

Atheroma : the outline is knobbly and uneven (Plate VI, Figs. 3, 4), and when a main vessel is occluded a long segment tends to be affected.

Buerger's disease : the vessels apart from the occluded segment seem to be normal and the affected portion tends to be short (Plate V, Fig. 1).

It is interesting to note how often the thrombus has one end at the opening in the adductor magnus through which passes the superficial femoral artery : it suggests that this is the site of origin, with occlusion spreading up or down as the case may be (Plate V, Fig. 1, Plate VI, Fig. 4).

This work was done with the help of a Beaverbrook Fellowship, which I gratefully acknowledge. I would like, also, to thank Professor Milnes Walker, M.S., F.R.C.S., and Mr. Croot, F.R.C.S., for allowing me to examine their cases and to publish this report and for their interest and encouragement in this work.

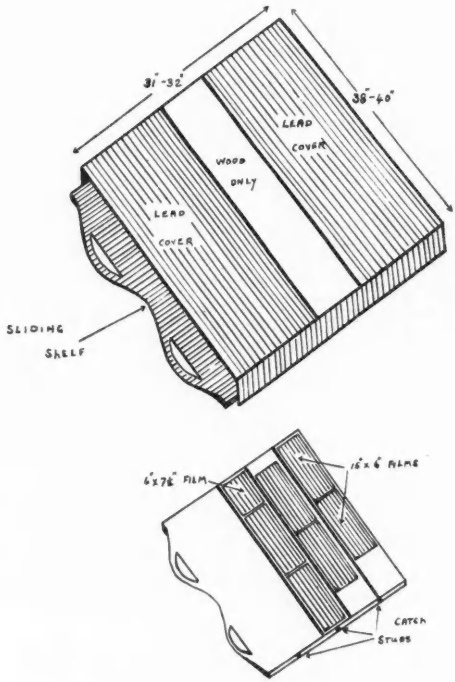

FIG. 5.

A box with sliding shelf for rapid film-changes. The patient lies on his back with buttock, thigh and leg on the central wooden portion of the box. The X-ray tube is, of course, centred on the wooden section so as to include the whole limb. As the shelf is pulled out, so the exposed films come under lead cover and fresh ones slide into place.

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THE SURGERY OF VASCULAR DISEASE*

BY

R. MILNES WALKER, M.S., F.R.C.S.

Professor of Surgery, University of Bristol

IN this paper I do not propose to discuss the great advances which have been made recently in dealing with the large vessels in the chest and abdomen. Although first reported in 1945, they are all based on the methods of suture which were laid down by Alexis Carrel, as a result of experimental work, more than forty years ago. It was in 1906 that he successfully transplanted the kidneys of one dog into another with suture of their main blood-vessels.[1]

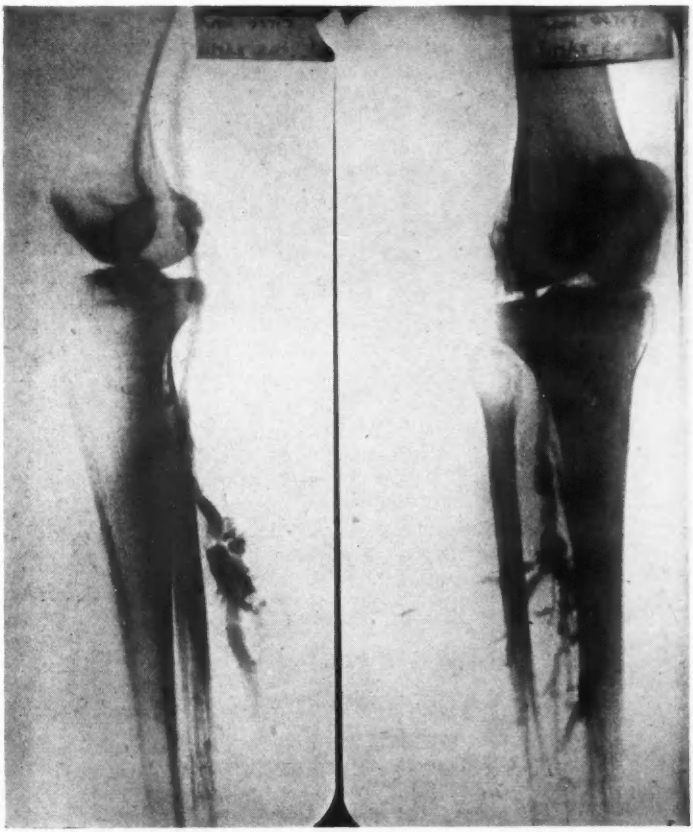
It is more practical to turn our attention to the vascular disturbances in the limbs, for these are common and distressing maladies. We are learning much from angeiography, the method of investigation described in Mr. Moore's paper (p. 37).

RAYNAUD'S DISEASE

I am going to confine my remarks to five diseases affecting the peripheral vessels, all but one fairly common. First of all, Raynaud's Disease, described in 1862 in a thesis by Maurice Raynaud on his inauguration as a member of the Academy of Medicine in Paris. The symptoms are too well known for me to reiterate them here. The prognosis is very variable. Some patients appear to get well after a lapse of time and the spasms pass off completely: but the disease may run a course of 5, 10 or even 20 years, although we rarely see it in older people, and one has to bear this in mind in assessing the results of treatment. As we do not know the cause all treatment is really palliative. The avoidance of cold and other medical means may keep the disease in abeyance in the milder cases, but most of the severe ones come to surgical treatment: the usual method is a pre-ganglionic section of the sympathetic nerve fibres of the upper limb, although I am doubtful if this has any advantages over post-ganglionic section except that it avoids Horner's syndrome. The results are not entirely satisfactory. The immediate effects are dramatic—the hands remain pink and warm and, usually, through the first winter this good result is maintained: but some cases relapse during the second or third years after operation, although

*An address delivered before the Bristol Medico-Chirurgical Society, 12th January, 1949.

PLATE VII



Large Venous Channels in Calf of Normal Person.

in most patients the benefit is so marked and lasting that the operation (which carries practically no risks) is well worth while.

THROMBO-ANGEITIS OBLITERANS

I am going to pass on to the disease known as thrombo-angeitis obliterans, first described in detail by Buerger in 1908 and often given his name. It occurs almost exclusively in men between the ages of 25 and 50, and tobacco-smoking seems to play a part in its ætiology ; of 350 patients treated at the Mayo Clinic, only three were non-smokers.[2] The disease usually affects the medium-sized and smaller arteries in the legs, although it may in time involve the vessels of the upper limbs and occasionally the mesenteric, coronary or cerebral arteries. Intermittent claudication is the earliest symptom in 75 per cent. of cases, but ulceration or gangrene may involve the toes or the heel. Usually, the smaller vessels are the worst affected : but since we have taken to making arteriograms of all these patients as a routine we have been surprised to find a number in which the block is a complete obliteration of the popliteal artery, and these patients suffer from severe intermittent claudication as the result of the occlusion of the branches of this artery to the gastrocnemius and soleus muscles. (Plate V, Fig. 1.) If the main arteries lower down are patent, I believe that much can be done by excision of the obstructed portion of the artery and its replacement by a vein graft. We have carried out this procedure in one case, though I regret that subsequently thrombosis took place in the graft.

As a means of testing the value of sympathectomy, various tests can be applied, but injection of the sympathetic ganglion with procaine has the advantage that the patient can take exercise and thus give an indication of its effect on his claudication as well as on his skin-temperature. Sympathectomy, in many cases, staves off the necessity for amputation for a number of years. The prognosis of this disease is not serious as regards life, but a few patients die of coronary, cerebral or mesenteric occlusion. What is in one way more tragic is the risk of the loss of a limb, and in one series it was found that 9 per cent. of patients eventually lost *both* lower limbs. The site of amputation, which usually has to be done for intractable pain, varies from removal of a single digit to an amputation through the thigh, so each case must be judged on its merits with regard to the site of arterial obstruction, and here arteriography may be most valuable.

ARTERIO-SCLEROSIS

In arterio-sclerosis causing gangrene, sympathectomy has little place, and amputation above the knee is usually necessary. However, I would like to draw your attention to gangrene in diabetic patients ; in many instances, this is really an infective gangrene, with all the

usual signs of inflammation. Here the treatment is that of an infective lesion, and drastic amputation can be avoided; while active treatment in controlling the diabetes and chemotherapy are undertaken, abscesses must be widely opened, dead tissue removed, and, if bone is involved, the whole of that bone must be excised; this may mean the whole of a metatarsal, but even if this is a central one, it is surprising what a useful foot is left when healing takes place.

VARICOSE VEINS

I cannot omit from this subject the question of varicose veins. The cycle from extensive resection to injection therapy and back to modified excision is almost complete. Nowadays, injection therapy alone is reserved for very localized cases, and advanced cases are treated by ligature and division of the main venous trunks at the groin, the knee and sometimes the ankle as well. It is important to pay attention to the lesser saphenous vein: if its tributaries are affected, it must be divided where it pierces the deep fascia at the level of the crease of the knee. For long it has been taught that, if the deep veins are obstructed, operative treatment or injection of the superficial veins should not be undertaken. I fully agree that injections should not be used in such cases, for they may give rise to thrombosis of some remaining channels by which blood is returning from the leg. But if the main trunk of the internal saphenous vein is incompetent, and blood is flowing downwards instead of upwards, then nothing but good can result from ligature and division of this vein at three or four sites, thus breaking the column of blood which is causing high venous pressure in the foot and lower leg. Contra-indications to active treatment of varicose veins are recent thrombo-phlebitis or the presence of peripheral arterial disease, for in the latter case the congestion of the foot may be beneficial.

While speaking of thrombo-phlebitis, I am going to mention for a moment the question of post-operative thrombosis, which is so apt to start in the deep veins of the muscles of the calf. We have taken the opportunity of studying these veins in normal people when intravenous pyelography is performed, and have been surprised to find the size of these venous channels in persons showing no clinical evidence of varicose veins. (Plate VII.) In these channels, the movement of blood must be very slow and it is no wonder that thrombosis occurs here in a patient confined to bed. The use of the anti-coagulants, heparin or dicoumarol, has revolutionized its treatment, and many cases are up and walking about after only a few days. Occasional thrombosis in a superficial vein, if localized, is best treated by immediate excision, but ligature of the femoral vein for deep thrombosis in order to prevent a release of emboli is rarely called for.

ARTERIAL EMBOLISM

Finally, a word about arterial embolism ; after hæmorrhage, it is the most urgent surgical emergency, taking precedence over any acute abdominal condition. If the clot is removed within 6 or 8 hrs. complete recovery of the limb is very probable, but if there is longer delay than this the possibility of recovery rapidly diminishes. In my experience all these cases occur in patients suffering from auricular fibrillation, and some of them will die either as a result of their heart-condition, or from further embolism : but an attempt at embolectomy is nearly always worth while, particularly if the obstruction is at the most common site, the bifurcation of the common femoral artery.

During the last Session, we had an excellent exposition of the subject of injury to blood-vessels by Mr. Mason Brown.[3] In civilian life, however, we are faced with very great problems concerning their diseases. There are many points which require further elucidation, and these diseases are, in the main, common ones. Their study needs special technique and special instruments, and I think the problem is sufficiently serious to warrant setting-up in this Region a special unit for the study and treatment of peripheral vascular disease.

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[2] Allen, E. V., Barker, N. W., and Hines, E. A. (1947), *Peripheral Vascular Diseases*, London.

[3] Mason Brown, J. J. (1948), *Bristol Med. Chir. Journ.* **65**, 105.

THE SECOND CAREY COOMBS MEMORIAL LECTURE*

BY

SIR JOHN PARKINSON, M.D., F.R.C.P.

Physician, National Heart Hospital, London;

Consulting Physician, Cardiac Department, London Hospital.

DELIVERED IN THE UNIVERSITY OF BRISTOL
ON JANUARY 27th, 1949

ON

THE RADIOLOGY OF RHEUMATIC HEART DISEASE

THE lecturer opened with a tribute to the work of Dr. Carey Coombs on the ætiology of rheumatic heart disease. He pointed out that development of X-ray investigation of the heart had been extended by the introduction of angeiocardiography: that is, injection into a vein of a substance opaque to X-rays followed immediately by taking X-ray films of the heart.

Angeiocardiography has clarified our ideas on the X-ray appearances of the normal heart. The left middle or pulmonary arc used to be regarded as the shadow of the pulmonary artery, but we know now that this shadow is largely that of the left branch. The position of the valves has been studied in patients with calcification of the valves: the aortic valve is seen in approximately the centre of the heart's shadow, the mitral valve is close to it but lower and to the left. The left auricle may be called the posterior auricle, certainly in the right oblique view. The left oblique view is the best to demonstrate the course of the aorta.

Angeiocardiography is of special value in demonstrating the chambers of the heart. Radioscopy is considerably more accurate than percussion. The position of the apex beat, determined by palpation, may be misleading: thus the rapid, forcible beat in hyperthyroidism may lead to a false diagnosis of enlargement. So too in rheumatic carditis, X-rays have shown that enlargement of

*Although this was announced as the "Inaugural" Lecture, the first was delivered in the University on May 5th, 1937, and reported in our pages, Vol. LIV. (No. 204), p. 109–126.

the heart may occur during the disease, but not early as has been thought. The ventricle enlarges backwards as well as outwards, and this is best seen in the left oblique view, which well shows the changes in shape of the cardiac outline.

In radioscopy in the left oblique position, the "angle of clearance" is useful: i.e., the amount of rotation needed to bring the shadow of the left ventricle clear of that of the spine; if this angle exceeds 55°, enlargement is confirmed. A normal contour is said to be inconsistent with a diagnosis of carditis. But enlargement does not necessarily connote active rheumatic disease, for it may be the result of a previous attack. If enlargement has occurred it may remain, increase, or regress.

Calcified valves have been observed at post-mortem for years; they are now easily discerned on the screen under X-rays. Look first in the region of the aortic valves, next in that of the mitral. Aortic valvular disease was found in 202 out of 609 recruits with early rheumatic heart disease. Dr. Carey Coombs had estimated that one-half of all patients with rheumatic heart disease had an aortic valvular lesion. Aortic stenosis is a late result of rheumatic carditis occurring in childhood. Enlargement of the heart may be the first evidence of aortic incompetence.

Mitral incompetence is not now considered of great clinical importance; most mitral valvular disease is mitral stenosis. In mitral stenosis the upper half of the heart shadow is wide owing to the left auricle extending to right and left. Left auricular enlargement is, however, best seen in the right oblique position, with some barium in the œsophagus. Sometimes it is possible to see the outline of the auricle itself through the heart shadow.

Aortic incompetence with mitral stenosis form a combination not often enough diagnosed during life, though often discovered at necropsy.

In conclusion, the lecturer showed the value of angeiocardiography in the diagnosis of aortic aneurysms, some of which would otherwise be quite unsuspected during life. The lecture was illustrated by a large selection of lantern slides demonstrating the varied use of X-rays in cardiology.

PSYCHOGENIC RHEUMATISM: ITS DIFFERENTIATION FROM TRUE RHEUMATIC DISEASE *

BY

PHILIP S. HENCH, M.D.

Professor of Medicine, University of Minnesota (Mayo Foundation). Head of a section in the Division of Medicine, Mayo Clinic, Rochester, Minnesota, U.S.A.

Two of the many conditions commonly called " rheumatism" are actual joint diseases—(1) osteo-arthritis, a nuisance but not a calamity, and (2) rheumatoid arthritis, the most crippling of all. In two others there is no joint disease: (3) primary fibrositis, a periarticular or intramuscular condition producing aching and stiffness, and (4) " psychogenic rheumatism "—a psychoneurosis affecting the musculo-skeletal system and sometimes confounded with one of the others.

Osteo-arthritis causes aching and stiffness. It commonly affects the hips and lumbar spine, and the hands. There is no constitutional evidence of disease—anæmia, raised sedimentation-rate, etc. The joints are not swollen and movement, though painful, is little restricted : no flexion deformities or ankylosis. The essential feature is senile degeneration of cartilage : this becomes thin, sometimes even to exposure of underlying bone. The bone thickens and hardens—" eburnation," and there may be osteophytic lipping round the joints. The bone changes are hypertrophic rather than atrophic. The synovial membrane is not affected (no hydrops or pannus): the capsule of the joint and the muscles lose resiliency, " secondary fibrositis", without spasm or significant deformities. In X-rays, we see the joint-space narrowed, from absorption of cartilage. The bone margin throws a denser shadow than normal and osteophytes may be seen.

In rheumatoid arthritis there is aching and swelling of the joints: many joints are affected, especially those of the fingers. The fusiform swelling is often characteristic and, in addition, there is evidence of constitutional disease—raised sedimentation-rate and secondary anæmia. The swelling of joints is due chiefly to disease

* Abstract of an address to the Bath, Bristol and Somerset Branch of the B.M.A., at Bath, October 19th, 1948, and *Postgraduate Medicine*, 1947, I, vi.

of the synovial membrane, which becomes thickened and proliferates with formation of villi. Collections of round cells are a striking feature in the synovial membrane, in the adjacent bone and fibrous and muscular tissues. As disease progresses, the affected synovial membrane sends out a tongue, or pannus, of inflammatory tissue: first over, and then into, the cartilage. The cartilage is partly destroyed and the pannus produces adhesions between the joint surfaces, first fibrous then osseous. The inflammation in capsule and muscles gives rise to spasm and flexion deformities. In the X-rays we see periarticular cloudiness due to synovial thickening; atrophy or decalcification of underlying bone and narrowing of joint spaces. The changes in the synovial membrane, signs of systemic disease, muscular atrophy and flexion deformities distinguish this condition from the former. X-ray changes may not be obvious in the early phases.

Primary fibrositis produces characteristic aching pains in muscles of neck, shoulders, chest, etc. No evidence of systemic disease; sedimentation-rate normal; X-rays show nothing to explain symptoms. This is a primary or idiopathic condition: myositis or periarticular fibrosis without joint disease. No definite swelling, no deformities, no limitation of movement: stiffness generally worse in early morning, after rest, or in damp weather—relieved by heat, aspirin or movement. Biopsy shows no synovial changes.

"Psychogenic rheumatism" is a condition characterized by pains in various and many situations, without evidence of organic disease; no, or no material, X-ray changes; normal sedimentation-rate, etc. There may be other evidence of functional disturbance: the patient is introspective and non-co-operative. Moods and feelings may influence symptoms, but usually not temperature and weather; exercise makes symptoms worse, and rest relieves; heat, aspirin and similar treatment do not help.

"Psychogenic rheumatism" is the musculo-skeletal expression of functional disorders, tension states or psychoneuroses, and is one of the common causes of aches and pains. In the Army's rheumatism centres about 15 per cent. of all "rheumatic" patients were psychogenic, generally with no evidence of organic disease. In some cases "psychogenic rheumatism" was a marked functional overlay of some rheumatic disease such as fibrositis. In most, there is only a collection of symptoms. The underlying cause may be combat fatigue—certain soldiers just "couldn't take any more", with resultant "flight into illness". In other cases the basic difficulties were maladjustment to discipline, to criticism, to menial job, to the "indignities" and lack of privacy; to homesickness, to loneliness, to worry over illness or fidelity of wife; or to financial troubles.

In civilian life the basic difficulties may be such as these: a stern parent, an unattractive girl afraid her "chances are going",

a veteran forced by housing difficulties to live with "in-laws", lack of holidays, sexual difficulties, ageing spinsterhood—or even fear of rheumatism! In fact, different kinds of fears and frustrations. The family doctor, with his knowledge of the patient's personality and circumstances, has a unique opportunity to detect this condition. In "psychogenic rheumatism", "rheumatism remedies" are of little avail, except as a mild form of psychotherapy. These miserable souls need something more than heat, aspirin, etc. The results of psychiatric treatment are often most gratifying; but the first essential is the recognition by physician and patient that the trouble is the functional condition I have endeavoured to portray.

It seems that the difficulties which confront many country practitioners under the "Health" Act existed also in mediæval Mantua.

> "I do remember an apothecary,
> In tattered weeds, with overwhelming brows,
> Culling of simples; meagre were his looks,
> Sharp misery had worn him to the bones:
> And in his needy shop . . . about his shelves
> A beggarly account of empty boxes,
> Remnants of pack thread and old cakes of roses
> Were thinly scatter'd to make up a show."
>
> "Art thou so bare and full of wretchedness,
> And fear'st to die? Famine is in thy cheeks,
> Need and oppression starveth in thine eyes,
> Contempt and beggary hang upon thy back;
> The world is not thy friend nor the world's law:
> The world affords no law to make thee rich."
>
> *Romeo and Juliet*, Act v, Sc. i.

Editorial Notes

Ministerial Dicta.

A FEW weeks ago the Minister of Health urged improvements in hospital out-patient departments, such as appointments and comfortable chairs in waiting-rooms. Appointments have been given for over twenty years. Before that, in the dark ages, the doctor would hand his patient a note, saying : " Take that to the hospital to-morrow at 10.30 ". Was it worse to wait in the out-patient department for an hour or even two (seldom more) or as now to wait five or six weeks for an appointment ?

Our standard of comfort is certainly modest. Yet the arrangements in our large teaching hospitals are at least as good as those in " private " (e.g. Workmen's Aid Association) hospitals, managed entirely by the patients' representatives. For years the problem for *all* management committees has been how to get money for essential treatment : they have had little to spare for anything beyond this. It was pleasant to feel that now at last it was possible to do many things that financial stringency has hitherto forbidden.

Any complacency on this score was very quickly dissipated by the order to reduce estimates by one-eighth or even one-sixth, coupled with the injunction that the interests of the patients are not to be sacrificed. In hospital expenditure salaries for nursing and domestic staff account for nearly two-thirds ; food and drugs for patients for more than half the balance ; maintenance and repair of buildings and equipment, administration and medical staff payments together about one-sixth. The problem is, therefore, almost insoluble. At least we can rejoice that the interests of the patients, the sole *raison d'être* of the hospitals, are still paramount : and not, as some had begun to suspect, the collection of elaborate and probably useless statistics.

Editor's Report

October, 1948

THE Spring issue did not appear until May, since when we have been able to produce only one number : but " Autumn " will be in your hands in a few days, and " Winter " before the end of the year. We shall thus be able to return to the official plan with " Spring, 1949 " in January. One legacy of the war is a very great

increase in the cost of typesetting and paper. This has imposed certain economies, for example, a limitation of the length of articles, omission of lists of past presidents, subscribers, and the less important examinations results, etc.

You will notice that our old title has been set out in a different style, to being back into prominence our claim to be the *Journal* for the West of England and South Wales. For another result of the war was a considerable loss of members and also of non-member subscribers to the *Journal*, a loss which it is our next task to replace. We compiled a list of former Bristol students, a tedious business. A complimentary copy of the *Journal*, with explanatory letter, has been sent to all former students (338), to practitioners in various parts of the Region (272) and to the secretaries of local medical societies (58), in all 668 copies. Already subscriptions are coming in, and the secretaries have agreed to bring the matter before their societies this Autumn, from which we may expect more. Bath and Cardiff have appointed Local Correspondents, and we hope that soon we shall again, as formerly, be able to give some account of meetings and activities throughout the South West. And with an increased circulation we shall be able to provide a larger and better *Journal*. This must necessarily depend largely on the increase in non-member subscriptions, for obviously the space devoted to the affairs of any area must bear some relationship to the number of subscribers in that area.

The accounts for the year show that the *Journal* made a very small profit during the year, after allowing for the expense of the complimentary issue. For the information of members the expenses for three issues have been "dissected" into components, demonstrating that typesetting accounts for more than half the total expense of each issue. The price of books reviewed in the *Journal* and handed over to the library during the year is £24 6s. 6d.; seventy-eight journals were received in exchange priced at £100: this £124 6s. 6d. represents "invisible" revenue which the *Journal* earns for the Society.

The Accounts and Balance Sheet require a little explanation: partly because members' subscriptions have been shown as "grants" to the *Journal*, creating the impression that these amounts were subsidies additional to the actual subscription. During the war the Society did not meet and the accounts were not audited. In 1946 the accounts for seven years were audited together. Unfortunately there were two important omissions: first, the auditors took account of sums received from the Society (£635 0s. 0d.), but treated these as the total amount due, whereas, in fact, the subscriptions due on behalf of members amounted to £819 18s. 0d. The accounts published in the *Journal* (1946, p. 156) showed the balance due as an asset; and consequently increased the credit balance by this amount.

	£	s.	d.
Credit Balance :			
Published	192	12	11
Auditors' figure	7	14	11
	£184	18	0

	£	s.	d.
Subscriptions due (7 years)	819	18	0
Less amount paid	635	0	0
	£184	18	0

The second omission was due to accounts for printing the 1946 issues not being available to the auditors. The small credit balance shown above should really have been a large deficit :

	£	s.	d.
Spring, 1946, cost	114	5	7
Summer and Autumn ..	138	14	10
Winter	80	17	11
Cost of 1946 issue	£333	18	4

	£	s.	d.
Credit Balance (Auditors' figure)	7	14	11
"True" Debit Balance, ignoring the sum of £184 18s. 0d. due from Society	326	3	5
	£333	18	4

JOURNAL ACCOUNTS, 1947

EXPENDITURE

	£	s.	d.	£	s.	d.
inting—						
Spring and Summer	150	9	9			
Autumn	81	10	6			
Winter	61	0	10			
				293	1	1
uditors' Fee				2	2	0
				295	3	1
rplus for year ..				56	5	10
				£351	8	11

INCOME

	£	s.	d.
Non-members' Subscriptions ..	22	15	0
Members' Subscriptions.	244	0	0
Arrears (1945) paid on Account..	84	13	11
	£351	8	11

LIABILITIES

	£	s.	d.
W. Arrowsmith Ltd., as above	293	1	1
uditors*	1	11	6
	£294	12	7

ASSETS

	£	s.	d.	£	s.	d.
Cash at Bank				24	15	0.
Balance, 1946	326	3	5			
Less Surplus, 1947 ..	56	5	10			
Debit Balance, 1947 ..				269	17	7
				£294	12	7

* I cannot explain why amount due to Auditors is less than the fee charged under expenditure.—ED.

INCOME AND EXPENDITURE ACCOUNT for the year ended 30th September, 1948

EXPENDITURE	£	s.	d.
Printing—			
Spring, 1948	120	5	5
Summer, 1948	57	11	9
Autumn, 1948	60	7	4
Winter, 1948 (estimate)	50	0	0
	288	4	6
Complimentary issue	75	7	1
Stationery (office)	7	18	1
Due to J. W. Arrowsmith Ltd	371	9	8
Auditors Fee	3	3	0
Postage	1	10	0
Surplus for year			10
	£376	3	6

INCOME	£	s.	d.
Members' Subscriptions	356	0	
Non-members' Subscriptions	20	3	
	£376	3	

BALANCE SHEET as at 30th September, 1948

LIABILITIES	£	s.	d.
Due to J. W. Arrowsmith Ltd.	371	9	8
Auditors Fee	3	3	0
	£374	12	8

ASSETS	£	s.	d.	£	s.	d.
Cash at Bank, current account				34	19	
Due from Society for 1948				69	16	
Deficit—						
September, 1947	269	17	7			
Less Surplus			10			
				269	16	
				£374	12	

ANALYSIS OF JOURNAL EXPENSES, 1948

	Summer			*Autumn*			*Winter*		
	£	s.	d.	£	s.	d.	£	s.	d.
Original Articles	38	13	4	40	2	8	35	6	0
Reviews Notes, etc.	20	16	4	18	1	6	22	3	10
Advertisements	16	8	4	16	1	5	14	16	1
Typesetting	40	2	2	40	9	11	42	15	9
Paper	4	4	8	4	8	8	4	8	5
Printing, Cover, Despatch	32	1	2	29	7	0	25	1	9
	76	8	0	74	5	7	72	5	11
Received for Advertisements	18	16	3	13	18	3	17	17	6
Nett	£57	11	9	£60	7	4	£54	7	5

Although it is not formally audited, Mr. Keeler has agreed that this account is correct and accurately represents the position on 30th September, 1948. But there is still due to the *Journal*, for 1939–45, the balance of the £184 18s. 0d., of which £84 13s. 11d. was paid in 1947, viz. £100 4s. 1d.

Obituary

EDWIN LEONARD LEES, M.D., C.M. EDIN.

DR. LEONARD LEES, who died on January 10th, 1949, was born at St. Andrews in 1863, and received his medical training at Edinburgh, where he was a student under Dr. Joseph Bell, the prototype of Sherlock Holmes. He qualified in 1885 and then came to Bristol, where he became first partner and later successor to Dr. Coleman in Redland. He took his M.D. in 1890. He was appointed House Surgeon to the Children's Hospital, then Registrar and in 1896 Physician: he held this appointment until 1905 when he was appointed Consultant Physician. During the whole of his life, until he retired in 1946, he was in busy general practice, and endeared himself to all whom he met, patients and colleagues alike. He was an enthusiastic pioneer motorist and a keen golfer. In 1890 he married Miss Alma Ehlers: to her and to their family we tender our sincere sympathies.

Reviews of Books

Diseases of the Ear, Nose and Throat. By D. G. CARRUTHERS, F.R.A.C.S. Second Edition. Pp. 344. Illustrated. Bristol: John Wright & Sons Ltd. Price 25s.—This book is disappointing: parts are excellent, but quite a large proportion is inadequate. The illustrations are all good, but too many are devoted to instruments and operations. Indeed, too much space is given to operative technique; for example, twenty pages to tonsillectomy, almost as much as to the whole of "Larynx". X-rays of the sinuses are good: but the only other methods of diagnosing sinus disease that receive mention are the Victorian procedures of transillumination and proof-puncture, still apparently in use in the Antipodes—endoscopy, displacement, suction are not even mentioned. The first edition of the book was apparently well received in Australia, but we cannot recommended it to students or practitioners here.

A Manual of Practical Obstetrics. By O'DONEL BROWNE, Litt.D., M.B., F.R.C.P., F.R.C.O.G. Second Edition. Pp. viii, 267. Illustrated. Bristol: John Wright & Sons Ltd. 1948. Price 35s.—This book sets out to be a manual of practical obstetrics, and those chapters dealing with the actual practice of obstetrics are good and helpful to the student. It wastes pages on the corpus luteum of menstruation and pregnancy, the development of the ovum, and the anatomy of the

pelvis ; these being dealt with in such brevity that they might with advantage have been omitted. The chapter on the diagnosis of pregnancy lays emphasis on Hegar's sign. In this country students are taught never to elicit it because of the danger of producing abortion. Many of the techniques advocated have been condemned by British obstetricians : e.g. induction of labour by bougies, plugging the uterus for post-partum hæmorrhage, and traction on the child's body in breech delivery. The subject-matter dealt with in the chapter on X-rays is excellent, but could be improved by showing plates of X-ray pelvimetry. The book is well set out, and arranged for rapid consultation by a student in an emergency, but its teaching is in many aspects opposed to that of British schools.

Practical Orthoptics in the Treatment of Squint. Third Edition. By T. KEITH LYLE, M.D., M.Ch., M.R.C.P., F.R.C.S., and SYLVIA JACKSON, S.R.N., D.B.O. Pp. xii, 271. Illustrated. London : H. K. Lewis & Co. Ltd. 1949. Price 35s.—Though perhaps primarily addressed to students who will be sitting for the Diploma of the British Orthoptic Board, this book will, in fact, appeal to all interested in the treatment of squint cases. The theory and practical management of orthoptic cases, the potentialities and limitations of training, are clearly set forth. Latent and paralytic strabismus is discussed at length. This section of the book contains many valuable illustrative case-histories from the authors' immense knowledge and practical experience in this branch of ophthalmological practice. The subject-matter has been brought completely up to date and incorporates all recent advances in orthoptics and the treatment of strabismus generally. The presentation is logical and extraordinarily lucid. The many illustrations, diagrams and charts permit of no misinterpretations. The book is complete with bibliography, glossary, and a full and accurate index, faultless in production, and worthy of the highest praise.

Malignant Disease and Its Treatment by Radium. Vols. I and II. By SIR STANFORD CADE, K.B.E., C.B., F.R.C.S., M.R.C.P. Second Edition. Pp. xi, 383 ; xi, 430. Illustrated. Bristol : John Wright & Sons Ltd. 1948–49. Price 52s. 6d. per volume.—The first two volumes of the four which comprise the second edition of this work have now been published. The first volume contains Parts I and II of the work ; the third and main part being formed by the remaining three volumes. In Part I are surveyed the properties of radium, its radiations, and the techniques for applying those radiations to the treatment of malignant diseases. Part II contains the description of the biological effects of irradiation. The physical section covers its ground adequately and contains chapters by three of the foremost physicists. The biological section presents a present-day picture of the effects of radiation, mainly from a clinician's point of view. Full reference is made to the classic researches of past workers, while modern experimental work is described in a chapter by Dr. F. G. Spear. The whole volume is a store of information, and contains an extensive bibliography. There are few aspects of the subject upon which specialists will fail to obtain guidance, while

a general surgeon or physician should also find much of interest. The second volume covers approximately the field which is of interest to the ear, nose and throat surgeon. Malignant disease of the thyroid and salivary gland have been included in its scope. It begins the main part of a work which will be an unrivalled exposition of the whole field of radium treatment. This is an essential volume for the radiotherapist. Nowhere else will he find so authoritatively detailed and practical an account of the pathology, symptoms and signs of malignant growths, and their treatment with radium. Every surgeon who has to deal with these cases in any number should have access to the book. The study of it must inevitably improve his appreciation of the respective uses of irradiation and surgery in the treatment of malignancy. The radiation therapist using this work may be regretful that, as the title indicates, the emphasis is on radium treatment, which the author tends to favour to the exclusion of X-ray therapy. But it may be remembered that in some of the foremost radiotherapy departments in the country small field X-ray therapy is used successfully where the author prescribes teleradium.

Introduction to Public Health. By E. W. CARYL THOMAS, M.D., B.Sc., D.P.H., Barrister-at-Law. Pp. 271. Bristol: John Wright & Sons Ltd. 1949. Price 15s.—This book has been written since the National Health Service Act came into force on July 5th, 1948. In ordinary times it is very difficult to obtain an up-to-date book on public health. It is more than ever necessary in view of the Health Act and, indeed, a new approach is essential in the circumstances. This book meets these requirements very well. The writer points out that it is limited in scope, for, as its title indicates, it is an *introduction* to public health. "It is an amplification of the notes of lectures on hygiene and public health given to medical students." The approach through the historic background makes the subject more interesting. It can be strongly recommended, not only to medical students working for their final examination, but also to student sanitary inspectors and health visitors and, indeed, to doctors in general practice who want to be brought up to date on this subject.

Clinical Examination of the Nervous System. Ninth Edition. By G. H. MONRAD-KROHN, M.D., F.R.C.P. Pp. xx, 459. Illustrated. London: H. K. Lewis & Co. Ltd. 1948. Price 16s.—This book achieves admirably its purpose of presenting the clinical facts of neurology in a clear and concise form. It is the more commendable because the text is the author's own writing in exemplary English. The book is reliable and up to date. Although emphasis is rightly placed on the importance of the clinical method, appropriate space is given to the newer radiographic methods of investigation. The production is excellent and in this, the ninth, edition art-paper has been used throughout. Illustrations of high quality abound; they are drawn from the author's superb collection. The book has long been deservedly popular with students; and the practising neurologist will find useful information in these pages.

Cum Notitia. By D. A. ALEXANDER, M.B., Ch.B. Pp. 394. Bristol: John Wright & Sons Ltd. 1949. Price 12s. 6d.—This volume consists of a series of short, clinical notes of cases observed by the author during a long life in general practice. It is full of interesting observations and comment, presented in a highly individualistic style—which, indeed, at times renders the meaning somewhat obscure. "I," "we" and "one," or two different spellings of the same word in adjacent lines, suggest that more care might have been given to editing and proof reading.

Zinc Ions in Ear, Nose and Throat Work. By A. R. FRIEL, M.D., F.R.C.S. Pp. 60. Illustrated. Bristol: John Wright & Sons Ltd. 1948. 5s. 6d.—This book, which is in the main an epitome of the author's *Notes on Chronic Otohorræa* published twenty years ago, suffers from the condensation both in style of the text and in the illustrations, the latter falling far below the standard of the previous volume. It is primarily written for medical officers in charge of school aural clinics and their assistants, and describes the principles and application of this method of treatment. Ionization is spectacular and mysterious, and appeals strongly to lay committees: it has been revived five or six times since it was abandoned in 1890. The end results are not superior to those of other modern methods. The present extension of the work to the wider field of the nose and throat describes methods which are time-consuming and unlikely to displace better-known surgical procedure.

Meetings of Societies

CLINICAL SOCIETY OF BATH

7th January: Mr. J. Sanson, F.R.C.S.; **"Selene and Periodicity".**

The speaker exemplified the very widespread and varied forms of life, especially of the sea-urchin type, whose gonadal activity and spawning were markedly influenced by the phase of the moon. Lunar influences were recognized so far back as written and legendary history could be traced in the Mediterranean and among the primitive tribes of the South Seas. The latter had for centuries accurately anticipated the maturing of the palalo worm exactly one week after the August full moon and set aside this time of fabulous catches for fishing festivals and celebration. The belief that human fertility and menstruation were controlled by lunar sources was based largely on superstition, but it had been demonstrated that plant germination was positively influenced by moonlight. A possible explanation of this lay in the 15–25 per cent of polarized light in moonlight during certain phases only.

Mr. Sanson cited many other examples of moonlight activity, ranging from the migration of eels to the Sargasso sea to bathing parties on the Californian beaches in search of sea-urchins. He doubted whether any true effect was produced by the moon in cases of lunacy, or whether the reputed link-up between therapeutic medicine and the lunar phases was more than superstition.

4th February: Mr. A. E. Burton, F.R.C.S., read a paper on **"Rehabilitation in Peace and War".**

The paper stressed that, although industrial medical officers had worked on the immediate and somewhat short-term rehabilitation of the injured workman since 1930–35, it was only during and since the recent war that the long-term functional and psychological rehabilitation problems had been fully evaluated. This had been most fully worked out in the R.A.F. largely because of the ability to fly home injured personnel during early stages of the war and thus establish special units, and also because of the exceptional value both financially and otherwise of the trained aircrew personnel. Partly because of this, and their high morale, it was possible to return no fewer than 83 per cent. of injured aircrew to some form of flying activity.

In peace-time there existed an equal need for a fully thought-out treatment in adequate and pleasant centres, with proper regard to the easing of financial and psychological stress and imbuing a standard of high morale and an attitude of self-help in the injured workman. Liaison schemes between such centres and the Ministry of Labour were already in existence and were capable of a great deal of development, but Mr. Burton stressed very forcibly the need, not only for producing a functionally good result, but a fit, happy and willing human being.

4th March: Discussion on minor medicine and surgery.

Clinical cases were shown at all three meetings, perhaps the most interesting being two cases of total gastrectomy for cancer by Mr. Kindersley. A third case, with anastamosis of the œsophagus to the small intestine was shown by Mr. S. Glaser. Mr. Kindersley also showed a case of removal of the duodenum and head of the pancreas for neoplasm, the stump of the pancreas, bile duct and stomach being anastamosed independently into the small gut. Dr. H. Lovell Hoffman showed a case of tumour of the optic thalamus successfully treated by irradiation. Progress had been satisfactory and epileptiform fits were decreasing in frequency. The patient attended as an out-patient.

CARDIFF MEDICAL SOCIETY

MEETINGS held, 11th November: Dr. Mary Cross, **"The Premature Infant".** 9th December: Mr. Dickson Wright, **"The Surgical Treatment of Hypertension".** 13th January: Sir Maurice Cassidy, **"The New Cardiology".** 10th February: Dr. Dillwyn Thomas, **"Surgery in the Treatment of Pulmonary Tuberculosis".**

GLOUCESTER MEDICAL SOCIETY

Meetings held. The following B.M.A. meetings are being held during this Winter Session. 10th March: Dr. Erskine on **"Some Common Skin Disorders".**

Forthcoming meetings. 12th May: Annual Meeting. 9th June: Dr. C. E. Lakin, F.R.C.P., F.R.C.S., **"Some Enigmas of Diagnosis".**

WEST SOMERSET MEDICAL CLUB

ON 17th February: Dr. Charles Wroth, D.M.R.E., at Bridgwater Hospital; **"X-ray Co-operation".**

Dr. Wroth emphasized the importance of consultants forming a close liaison with the radiologist, giving the radiologist a reasonable history of the case and allowing him to choose the "positions" which would help in the diagnosis.

"Too often, consultants, especially orthopædic surgeons, consider that radiographers have the power of telepathy. . . . Radiographers have a very concentrated technical training but, unfortunately, this does not include pathology; it would help considerably in many cases if the consultant could approach the radiologist directly." Dr. Wroth showed many interesting films to illustrate the numerous pitfalls of interpreting radiographs.

23rd February: Mr. N. P. Capener, F.R.C.S., at the Ministry of Pensions Hospital, Musgrove Park, **"Osteo-Arthritis of the Hip".** Mr. R. F. Winckworth, F.R.C.S., in the chair. Mr. Capener explained in great detail the condition of osteo-arthritis in the adult. The old operations and the more recent advances were explained and some excellent slides were shown. Several clinical cases from the Ministry of Pensions were exhibited and it was noted the remarkable recovery which many of these people had made.

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.

ON January 20th Dr. J. Gibbens, M.R.C.P., gave an address on the evils of over-feeding young children, reported in the *Lancet*, February 5th, 1949.

PLYMOUTH MEDICAL SOCIETY

PRESIDENT for 1948–9 Dr. H. Guy Ludolf; Secretaries Dr. S. M. Davidson and Dr. Robert Walker. The Library is to be installed in the Board Room of the Prince of Wales's Hospital where most of the meetings are held. The Annual Dinner and Dance were held at the Duke of Cornwall Hotel in October. 2nd November, clinical meeting: Mr. Riddell shewed a granulosa-celled tumour; Dr. Lister, a case of multiple myelomatosis; Mr. Duncan Wood, a case of plasmocytoma of the femur and Dr. Steed, a patient who having had gout, tabes and amœbic dysentery, with a calcified cyst in his liver, also had a liver cyst from which several pints of fluid were removed at intervals. 19th November: Professor Drew Smythe, gynæcological cancer, its early diagnosis and the place of radium in treatment. 10th December: films of anæsthesia and of patent ductus arteriosus. 14th January: Mr. Ashton Miller, genito-urinary carcinoma. 1st February, clinical meeting: Dr. Croft showed cases of acromegaly and Cushing's syndrome and discussed the pituitary disorders. Dr. Larks exhibited urethral calculi, Dr. Shore and Dr. Lister shewed a case and discussed the treatment of tuberculous meningitis by streptomycin. Mr. Wilson discussed the diagnosis and surgical treatment of hydronephrosis associated with aberrant renal artery. 25th February: Mr. Wilson, **"Lumps in the breast".** Dr. Croft, **"Rheumatism in the Home"**; the diagnosis, prevention and

treatment of rheumatoid and osteo-arthritis, dealing mainly with aspects which affected the general practitioner.

A further clinical meeting takes place on 25th March and Professor Lambert Rogers will address a joint meeting with the B.M.A. on "**Sciatica**" on 11th March.

SOUTH-WESTERN LARYNGOLOGICAL ASSOCIATION

THE third meeting of the session was held at the Royal Victoria and West Hants Hospital, Bournemouth, on Saturday, April 2nd. Messrs. Cowan, Mackenzie Ross, Salkeld and Adeney showed twenty extremely interesting cases, including seven "for diagnosis". These gave rise to a lively discussion. The meeting was well attended and very much enjoyed. The next meeting will be on October 1st at Salisbury. Mr. W. H. Bradbeer has been elected Chairman for 1949–50.

BRITISH MEDICAL ASSOCIATION—SOUTH WALES BRANCH

A SUPPER Meeting was held at the Park Hotel, Cardiff, on the evening of 23rd February. Dr. Charles Hill addressed the meeting on "**Current Problems**".

The Annual Dinner of the Society was held at The Royal Hotel, Wednesday, 9th March. Address by Air Marshal P. C. Livingstone, C.B., C.B.E., A.F.C., F.R.C.S., K.H.S., Director-General of Medical Services, R.A.F., at the Engineers' Institute, Park Place, Cardiff; subject: "**Food for Thought**".

Local Medical Notes

The Thirty-Eighth Long Fox Memorial Lecture will be given in the University of Bristol, on Tuesday, 18th October, 1949, by Professor J. E. HARRIS, M.A., Ph.D., on "**The use of Tracer Elements in Biology and Medicine.**"

VISIT OF PROFESSOR GREY TURNER TO BRISTOL

Professor G. Grey Turner honoured the University and Teaching Hospital by a visit from 21st February to 25th February, 1949. His name has long been a household word in British Surgery and many generation of students, both in Newcastle and at the Postgraduate Medical School in London, have benefited from his teaching. He was a great traveller and his discourses always reflected the benefits to be obtained from visits, official or unofficial, to other active centres of surgery, and in consequence, visits to see him at work either in Newcastle or London always provided a rich reward.

During his week in Bristol he undertook an active part in the work of the Department of Surgery. He attended the weekly conference in

the Pathological Department and a Surgical Pathological Conference. He taught in the wards, he taught in the outpatient department, and he demonstrated his skill in the operating theatre by performing a difficult sub-total gastrectomy for a high gastric ulcer by the Bilroth I method. In addition he attended ward rounds in the Thoracic Surgical and Neurosurgical Departments at Frenchay Hospital.

But perhaps the high spots of the visit were two lectures which he gave to enthusiastic audiences of staff and students. The first of these lectures dealt with some long-term results of the treatment of malignant disease and was illustrated by remarkable photographs of patients and pathological specimens, some of them dating from the early years of the century. This lecture finished with a note on the work of the Research Defence Society and its importance in medical practice. His second lecture described his achievements in transplantation of the ureters, mainly in patients with congenital abnormalities. He showed by the personal way in which he discussed them the human feeling which he has towards all his patients, for many of these have been his friends from childhood until they had brought up happy families themselves. In this lecture he turned to the prominent leaders of British Surgery since the days of Hunter, and paid particular tribute to Greig Smith and Hey Groves of Bristol, especially mentioning the debt which he owed to the former for his textbook.

Professor Grey Turner qualified in the University of Durham more than half a century ago and he speaks with a life-long experience of active surgery. His visit to Bristol will long be remembered by all who had the opportunity of meeting him and hearing his teaching. In the future when his name comes up amongst the great surgeons of the first half of the twentieth century, people will look back with satisfaction and think " I remember the occasion when Grey Turner visited Bristol ", and cherish the memory of seeing this great man at work.

DEGREES AND DIPLOMAS.

University of Bristol.—M.D.—J. B. Brierley.

D.M.R.D.—C. H. Kitchen.

M.B., CH.B.—*Second Examination*—F. J. Appelbe, W. M. Baggott, K. J. Barker, B. G. Bennett, A. R. Bollen, Ann E. Booker, J. C. Causton, Anne W. Christie, Jean M. Claremont, N. J. Cobb, B. J. F. Coles. B. Colston, P. A. Crook, W. J. P. Duff, K. W. Edmondson, K. J. R. Fawcett, H. G. Gage, E. C. Gawthorn, D. J. Gear, B. Ginsberg, W. E. L. Gordon, E. P. Hamblett, G. L. Higgins, Elizabeth M. James, J. W, Jenkins, A. F. Jordan, Janet H. Keevil, B. Livesey, G. P. Lowther, A. Moore, A. B. Otlet, I. W. Palmer, T. F. J. Parker, Ann C. Parry, Barbara M. Podger, M. N. Prichard, Alison W. Prowse, T. D. Richards, N. G. Sanerkin, R. A. Sellwood, P. H. Sherwood, H. S. Smith, J. E. Tovey, H. A. P. Walker, D. E. Worsley.

Royal College of Physicians.—M.R.C.P.—M. J. Greenberg.

Royal College of Surgeons.—D.L.O.—G. G. Allan, T. C. Forte.

Royal College of Obstetricians and Gynaecologists.—M.R.C.O.G. :—J. M. Duncan.